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FACTORS AFFECTING FREQUENCY OF PATIENT USE OF INTERNET-BASED TELEMEDICINE SYSTEM TO MANAGE CHRONIC CARDIOVASCULAR DISEASE RISK CONDITIONS

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Background: Because cardiovascular disease (CVD) has a long asymptomatic phase, management of CVD risk is often neglected. A strong patient-provider partnership is required to manage chronic CVD risk in asymptomatic patients. Telemedicine provides a cost-effective means of communication between patients and providers. The purpose of this study was to determine factors affecting patient use of an Internet-based telemedicine reporting system to manage CVD risk factors in an underserved population.

Methods: 192 patients from a telemedicine study group with Framingham risk score >= 10% were categorized into quartiles based on days of use of the Internet reporting system over one year. Health knowledge, behavioral, and demographic data for each quartile were analyzed.

Results: The lowest frequency users (Quartile I) averaged 17 reporting days/year, while the highest frequency users (Quartile IV) averaged 211 reporting days/year. Patients with a greater overall knowledge of CVD (p=0.014), lipids (p=0.017), and smoking (p=0.036) were more frequent users of the telemedicine system. Q4 users had a higher score in medication self-efficacy than Q1 users (p=0.016). Frequency of use was found to correlate directly with income (p=0.002). All quartiles showed a general trend of decreasing systolic blood pressure from hypertensive (>=140) to pre-hypertensive (<140) ranges over the course of the study.

Conclusions: Patients that were more knowledgeable of health conditions and illnesses used the Internet-based reporting system more frequently than less knowledgeable users. Patients were able to lower CVD risk with as few as two transmissions per month using the telemedicine system. Patient self-monitoring and communication with providers are essential to improve risk of CVD. Thus, methods to improve CVD risk in asymptomatic patients should focus on health literacy and motivation.